

Notice of Allowability

Application No.

10/064,886

Examiner

Dah-Wei D Yuan

Applicant(s)

BOURGEOIS ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/21/04.
2. ☒ The allowed claim(s) is/are 12-34.
3. ☒ The drawings filed on 27 August 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 06072004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

FUEL CELL STACK AND FUEL CELL MODULE

Examiner: Yuan S.N. 10/064,886 Art Unit: 1745 September 28, 2004

Detailed Action

1. The Applicant's amendment filed on July 21, 2004 was received. Claims 12,18,19,24 were amended. Claims 32-34 were added.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on June 4, 2004.

Claim Rejections

3. The claim rejections under 35 U.S.C. 102(e) as anticipated by Hsu on claims 12-17,20-23 are withdrawn because the independent claim 12 has been amended.

Reasons for Allowance

4. Claims 12-34 are allowed. The invention of independent claim 12 recites a fuel cell module comprising a vessel having an inlet and an outlet, at least three fuel cell stack arranged in a ring within the vessel, said fuel cell stacks separating an inner and an outer volume of the vessel, said inner and outer volumes being in fluid communication through said fuel cell stack, a plurality of electrical connections between the fuel cell stack, and a plurality of corner stack seals, each the corner stack seals being disposed along at least one of (a) an edge joining two of said fuel cell stacks and (b) a face joining two said fuel cell stacks, wherein each of the corner

stack seals comprises a leaky seal. The closest prior art of record, Hsu, does not teach or suggest the addition of a plurality of corner stack seals in a fuel cell module as stated in the claim.

The invention of independent claim 24 recites a fuel cell module comprising a vessel having an inlet and an outlet, at least three fuel cell stack arranged in a ring within the vessel, said fuel cell stacks separating an inner and an outer volume of the vessel, said inner and outer volumes being in fluid communication through said fuel cell stack, a plurality of electrical connections between the fuel cell stack, and at least one heat exchanger connecting a pair of said fuel cell stacks and configured to supply the fuel flow exhausted from one of said pair of fuel cell stacks to a second of said pair of fuel cell stacks. The closest prior art of record, Hsu, does not teach or suggest the use of at least one heat exchanger connecting a pair of said fuel cell stacks and configured to supply the fuel flow exhausted from one of said pair of fuel cell stacks to a second of said pair of fuel cell stacks in a fuel cell module.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan
September 28, 2004

A handwritten signature in black ink, appearing to read 'Dahwei Yuan', with a long horizontal flourish extending to the right.